

METHODS AND APPARATUS FOR
DETERMINATION OF A FILTER CENTER
FREQUENCY

ABSTRACT OF THE DISCLOSURE

A method for calculating a center frequency and a bandwidth for a radar doppler filter is herein described. The center frequency and bandwidth are calculated to provide radar performance over varying terrain and aircraft altitude, pitch, and roll. The method includes receiving an antenna mounting angle, a slant
5 range, and velocity vectors in body coordinates, calculating a range swath doppler velocity, a track and phase swath bandwidth, and a phase swath doppler velocity. The method continues by calculating a range swath center frequency based on the range swath doppler velocity, calculating a phase swath center frequency based on the phase swath doppler velocity, and calculating a level and verify swath bandwidth based upon
10 the track and phase swath bandwidth.